Amendments to the Claims

What is claimed is:

1. (currently amended) A method for identifying advantageous and non-advantageous infusion regions in a tissue, ~~said~~ the method comprising:

capturing via an imaging system ~~at least one of (i)~~ functional anatomical data and/or ~~(ii)~~ structural anatomical data before infusion of a fluid into the tissue;

evaluating the captured functional and/or structural anatomical data with computer assistance; ~~and~~

based on the evaluating step, identifying directional channels within the tissue and determining infusion distribution information related to the identified directional channels, the identified directional channels and/or infusion distribution information being indicative of advantageous and/or non-advantageous infusion regions; and

presenting identified advantageous and/or non-advantageous infusion regions for viewing by a user.

2. (currently amended) The method as set forth in claim 1, wherein evaluating the captured functional and/or structural anatomical data includes simulating a distribution of an infusion at a plurality of regions in the tissue.

3. (currently amended) The method as set forth in claim 1, wherein the determined infusion distribution information includes ~~at least one of (i)~~ direction information and/or ~~(ii)~~ velocity information relating to infusion regions in the tissue.

4. (currently amended) The method as set forth in claim 1, wherein the functional and/or structural anatomical data is evaluated two-dimensionally with respect to the distribution information which it contains.

5. (currently amended) The method as set forth in claim 1, wherein the functional and/or structural anatomical data is evaluated three-dimensionally with respect to the distribution information which it contains.

6. (currently amended) The method as set forth in claim 1, further comprising:

evaluating the functional and/or structural anatomical data over a period of time with respect to the distribution information; and

making adjustments in the distribution information, said adjustments being responsive to anatomical or structural conditions which have changed over the period of time.

7. (original) The method as set forth in claim 3, further comprising:

identifying regions of rapid diffusion.

8. (original) The method as set forth in claim 3, further comprising:

determining isotropy and anisotropy of flow directions in the regions in the tissue.

9. (currently amended) The method as set forth in claim 1, further comprising:

calculating a distribution volume for an infusion fluid from the functional and/or structural anatomical data.

10. (currently amended) The method as set forth in claim 1, wherein the functional and/or structural anatomical data is captured two-dimensionally.

11. (currently amended) The method as set forth in claim 10, wherein a number of two-dimensional data sets on the functional and/or structural anatomical data are combined to obtain three-dimensional information.

12. (currently amended) The method as set forth in claim 1, wherein the functional and/or structural anatomical data is captured three-dimensionally.

13. (original) A method for assisting planning for introducing an infusion fluid into regions of a brain, said method comprising:

identifying infusion regions using a method as set forth in claim 1; and

wherein introducing the infusion at a selected point is planned using stereotactic planning.

14. (original) A method for assisting navigation for introducing an infusion into regions of a brain, said method comprising:

identifying the infusion regions and positions for an infusion device are identified using a method as set forth in claim 1; and

wherein introducing the infusion device at a selected point is planned using stereotactic navigation.

15. (original) The method as set forth in claim 13, wherein anatomical, functional and/or structural tissue data are combined with information on a distribution of the infusion fluid to be expected for planning or navigation.

16. (currently amended) A computer program wherein ~~which~~, when the program is loaded onto ~~run on~~ a computer and executed causes the ~~or loaded onto a~~ computer~~,~~ ~~carries~~ to carry out the steps as set forth in claim 1.

17. (cancelled)

18. (currently amended) A device for assisting planning for introducing an infusion fluid into regions of the brain, said device comprising:

an imaging device ~~for capturing at least one of (i)~~ that captures functional and/or ~~(ii)~~ structural anatomical data before an infusion of fluid into regions of the brain;

a processor which:

performs and assists in evaluating the functional and/or structural anatomical data in order to identify directional channels within the regions of the brain and determine infusion distribution information related to the identified directional channels, the directional channels and infusion distribution information being indicative of advantageous and non-advantageous infusion regions; and

produces and evaluates a distribution simulation before the infusion fluid is infused, the distribution simulation being indicative of an infusion fluid when it is introduced at particular points, on the basis of the captured anatomical data; and

a computer-assisted, medical planning and navigation system for assisting in positioning an infusion device.

19. (original) The device as set forth in claim 18, wherein the imaging device includes a nuclear spin tomograph.

20. (original) The device as set forth in claim 18, wherein the imaging device, the processor and the medical planning and navigation system are connected to each other via data connections, thereby providing a constant or retrievable exchange of data.

21. (new) The method as set forth in claim 1, further comprising obtaining diffusion measurements before infusion via magnetic resonance diffusion imaging and identifying transport pathways based on the diffusion measurements.